

TDOECS2302

2MP HDCVI IR Eyeball Camera



- Max 30fps@1080P
- Built-in mic (-A)
- CVI/CVBS/AHD/TVI switchable
- 2.8mm fixed lens
- Max. IR length 30m, Smart IR
- IP67, DC12V



System Overview

Experience 1080P full HD video and the simplicity of using existing cabling infrastructure with HDCVI. The Lite series 1080P HDCVI camera features a compact design and offers a high quality image at a friendly price. It offers various motorized/fixed lens models with a multi-language OSD and HD/SD switchable output. Its structural flexibility and high cost-performance makes the camera an ideal choice for SMB solutions.

Functions

Broadcast-quality Audio

Audio information is used as supplementary evidence in video surveillance applications. The HDCVI camera supports audio signal transmission over coaxial cable. In addition, it adopts unique audio processing and transmission technology that best restores source audio and eliminates noise, guaranteeing the quality and effectiveness of collected audio information.

* Broadcast-quality audio is available for some models of HDCVI cameras.

4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals to be transmitted over 1 coaxial cable simultaneously, i.e. video, audio*, data and power. Dual-way data transmission allows the HDCVI camera to interact with the XVR, such as sending control signal or triggering alarm.

* Audio input is available for some models of HDCVI cameras.

Long Distance Transmission

HDCVI technology guarantees real-time transmission at long distance without any loss. It supports up to 800m(1080P)/1200m(720P) transmission via coaxial cable, and up to 300m(1080P)/450m(720P) via UTP cable.

*Actual results verified by real-scene testing in Dahua's test laboratory.

Simplicity

HDCVI technology inherits the born feature of simplicity from traditional analog surveillance system, making itself a best choice for investment protection. HDCVI system can seamlessly upgrade the traditional ana-log system without replacing existing coaxial cabling. The plug and play approach enables full HD video surveillance without the hassle of configuring a network.

Smart IR

The camera is designed with IR LED illumination for best lowlight performance. Smart IR is a technology to ensure brightness uniformity in B/W image under low illumination. TOUGHDOG's unique Smart IR adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object, and prevents IR LEDs from overexposing images as the object come closer to the camera.

Multi-formats

The camera supports multiple video formats including HDCVI, CVBS and other two common HD analog formats in the market. The four formats can be switched over through OSD menu or by PFM820(UTC controller). This feature makes the camera to be compatible with most end users' existing HD/SD DVRs.

Multi-language OSD

OSD menu provides multiple image adjustments and function settings to meet the requirements of different monitoring scenes. The OSD menu includes configurations such as backlight mode, day/night, white balance, privacy mask and motion detect. The camera supports 11 languages for OSD menu, namely, Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

Protection

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67 ranking, making it suitable for indoor or outdoor environments.

With working temperature range of -40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments. Supporting $\pm 30\%$ input voltage tolerance, this camera suits even the most unstable power supply conditions. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

Technical Specification

Camera

Image Sensor	1/2.7 inch CMOS
Effective Pixels	1920 (H)×1080 (V), 2MP
Electronic Shutter Speed	PAL: 1/25s–1/100000s NTSC: 1/30s–1/100000s
Minimum Illumination	0.02Lux/F1.85, 30IRE, 0Lux IR on
IR Distance	30m (98.42ft)
IR On/Off Control	Auto; manual
IR LEDs Number	1
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8mm; 3.6mm
Max. Aperture	F1.85/F2.0
Angle of View	2.8mm: 118°×103°×59° (diagonal×horizontal×vertical) 3.6mm: 103.8°×87.5°×47° (diagonal×horizontal×vertical)
Iris Type	Fixed iris
Close Focus Distance	0.5m (1.64ft)/0.9m (2.95ft)
DORI Distance	2.8mm: D: 37m (121ft), O: 15m (49ft), R: 8m (26ft), I: 4m (13ft) 3.6mm: D: 53m (174ft), O: 21m (69ft), R: 11m (36ft), I: 5m (16ft)

Video

Video Frame Rate	CVI: PAL: 1080P@25fp; 720P@25fps; 720@50fps NTSC: 1080P@30fp; 720P@30fps; 720@60fps AHD: PAL: 1080P@25fp; 720P@25fps NTSC: 1080P@30fp; 720P@30fps TVI: PAL: 1080P@25fp; 720P@25fps; 720@50fps NTSC: 1080P@30fp; 720P@30fps; 720@60fps CVBS: PAL: 960H NTSC: 960H
Resolution	1080P (1920×1080); 720P (1280×720); 960H (960×576/960×480)
Day/Night	Auto switch by ICR
BLC	BLC/HLC/DWDR
WDR	DWDR
White Balance	Auto; manual
Gain Control	Auto; manual
Noise Reduction	2D NR
Smart IR	Yes
Mirror	Off/On
Privacy Masking	Off/On (8 Area, Rectangle)

Certification

Certifications	CE (EN55032, EN55024, EN50130-4) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014) UL (UL60950-1+CAN/CSA C22.2 No.60950-1)
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Port

Video Port	Video output choices of CVI/TVI/AHD/CVBS by one BNC port
Audio Port	Built-in mic (-A)

Power










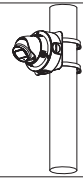

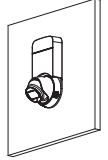
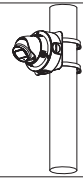

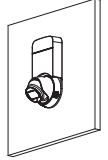
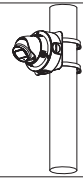

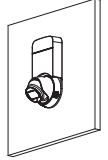
Power Supply	12V±30% DC
Power Consumption	Max 3.6W (12V DC, IR on)

Environment

Operating Temperature	-40°C to +60°C (-40°F to +140°F); <95% (non-condensation)
Storage Temperature	-40°C to +60°C (-40°F to +140°F); <95% (non-condensation)
Protection Grade	IP67

Structure

Casing	Inner core: metal+plastic; cover: plastic
Dimensions	Φ97.0mm×85.8mm (Φ3.82"×3.38")
Net Weight	0.22kg (0.49lb)
Gross Weight	0.28kg (0.62lb)

Ordering Information			Accessories								
Type		Description	Optional:								
2MP Camera		2MP HDCVI IR Eyeball Camera, PAL									
		2MP HDCVI IR Eyeball Camera, NTSC	Junction box (For use alone or with PFA152-E pole mount)	Plastic Junction box (For use alone)	Pole box (For use with junction mount)						
		2MP HDCVI IR Eyeball Camera, PAL									
		2MP HDCVI IR Eyeball Camera, NTSC	UTC Controller	Passive HDCVI Balun	Passive Video Balun						
Accessories		2MP HDCVI IR Eyeball Camera, PAL									
		2MP HDCVI IR Eyeball Camera, NTSC	Passive Video Balun	12V 1.5A Power Adapter	12V 2A Power Adapter						
		Junction box (For use alone or with PFA152-E pole mount)	<table border="1"> <thead> <tr> <th>Pole Mount</th> <th>Junction Mount</th> <th>Wall Mount</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Pole Mount	Junction Mount	Wall Mount			
	Pole Mount	Junction Mount				Wall Mount					
											
		Plastic Junction box (For use alone)									
		Pole box (For use with PFA130-E junction mount)									
		UTC Controller									
	Passive HDCVI Balun										
	Passive Video Balun										
	Passive Video Balun										
	12V 1.5A Power Adapter										
	12V 2A Power Adapter										

Dimensions (mm/inch)

